Grant Project Management Manual

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Virginia Department of Conservation and Recreation
Division of Soil & Water Conservation
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This Grant Project Management Manual is designed as a reference for Project Sponsors / Grantees and for DCR staff assigned as the DCR Project Manager for grants funded by the Virginia Department of Conservation and Recreation through the Virginia Water Quality Improvement Fund, EPA Chesapeake Bay Implementation Grant, EPA Section 319 / NPS Implementation Grant, and NOAA Coastal Nonpoint Program. The content of this manual is also available on the DCR website, ***http://www.dcr.virginia.gov/sw/grants.***

DCR
Department of Conservation & Recreation
CONSERVING VIRGINIA'S NATURAL & RECREATIONAL RESOURCES

(DCR – 199 – 174) (07/06)
(DCR – SW – 017) (07/06)

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(DCR – 199 – 174) (07/06)
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Grantee Reporting Requirements

The text below is excerpted from the standard DCR Grant Agreement.

(5) SCOPE OF SERVICE: The Grantee shall provide the services set forth in the Agreement documents…. Each *quarterly report,* due by the 15th of the following month, shall contain:

(1) A narrative – Describe the progress in fulfilling the Scope of Work and activities for each deliverable listed in the Milestone Table. Provide both accomplishments and challenges, and a financial narrative with itemized details of expenditures.

(2) An updated Project Financial Report Form (Attachment B) - On Attachment B, summarize expenses incurred in the columns under "DCR Funds" and Grantee contributions under "Match Funds." This form also serves as the reimbursement request, or invoice, for the Grantee, therefore, only copies with the original authorized signature will be accepted by DCR.

(3) An updated Milestone Table (Attachment C) – Enter "Actual Completion Date" for specific tasks on the table and provide relevant notes.

(4) NPS Pollution Tracking Data Form for BMPs (Attachment D) – Enter data for best management practices installed and completed, if applicable.

The *final report,* due 45 days after the Agreement terminates, shall summarize all major project accomplishments and challenges, as well as expenditures and matching contributions during the period after the project began through the termination date….

DCR Clarifications on Reporting Requirements

- **Quarterly reporting** is the standard schedule for DCR grant reporting and reimbursement requests. Quarterly reports are due by the 15th day of the following month. For example, the January – March quarterly report is due to the DCR Project Manager by April 15.

- If **no activities** for the grant have taken place during the quarter and no DCR expenditures have been incurred then the Project Sponsor may contact the DCR Project Manager and provide this explanation in writing. In no grant activities, a quarterly report is not necessary.

- A **financial narrative** is required in addition to the Attachment B. DCR requires the financial narrative in order to assure that all expenses are directly related to the grant project, fair and reasonable amounts, and in accordance with state and federal guidelines. Submission of copies of invoices and receipts is not required but may be provided, with the appropriate charges highlighted or clearly marked, in place of the itemized detail of expenditures that is required in the financial narrative.

- **NPS Tracking Form** (Attachment D) are only required during quarters when BMP construction is completed. No grants will be closed without the NPS Tracking Form(s).

- In some cases the **cumulative *final report*** is the only deliverable for a grant project, such as a research project where all data is compiled into a final document submitted at the close of the project. Grantees who submit quarterly reports throughout the term of the grant are not expected to repeat all previously reported details in a final report and instead may provide a broad summary of the entire project. In many cases it may only be necessary for a Grantee to submit a ***final quarterly report*** that by default serves as the final report.

Quarterly Report Schedule - Calendar

Quarterly reports for DCR grant projects are due to the DCR Project Manager by the 15th day of the month following the end of each calendar quarter. If the 15th is a holiday or weekend, the report is due the following workday. The example reporting schedule provided below is for 2007 calendar months.

The **January - March quarterly report** is due April 15.

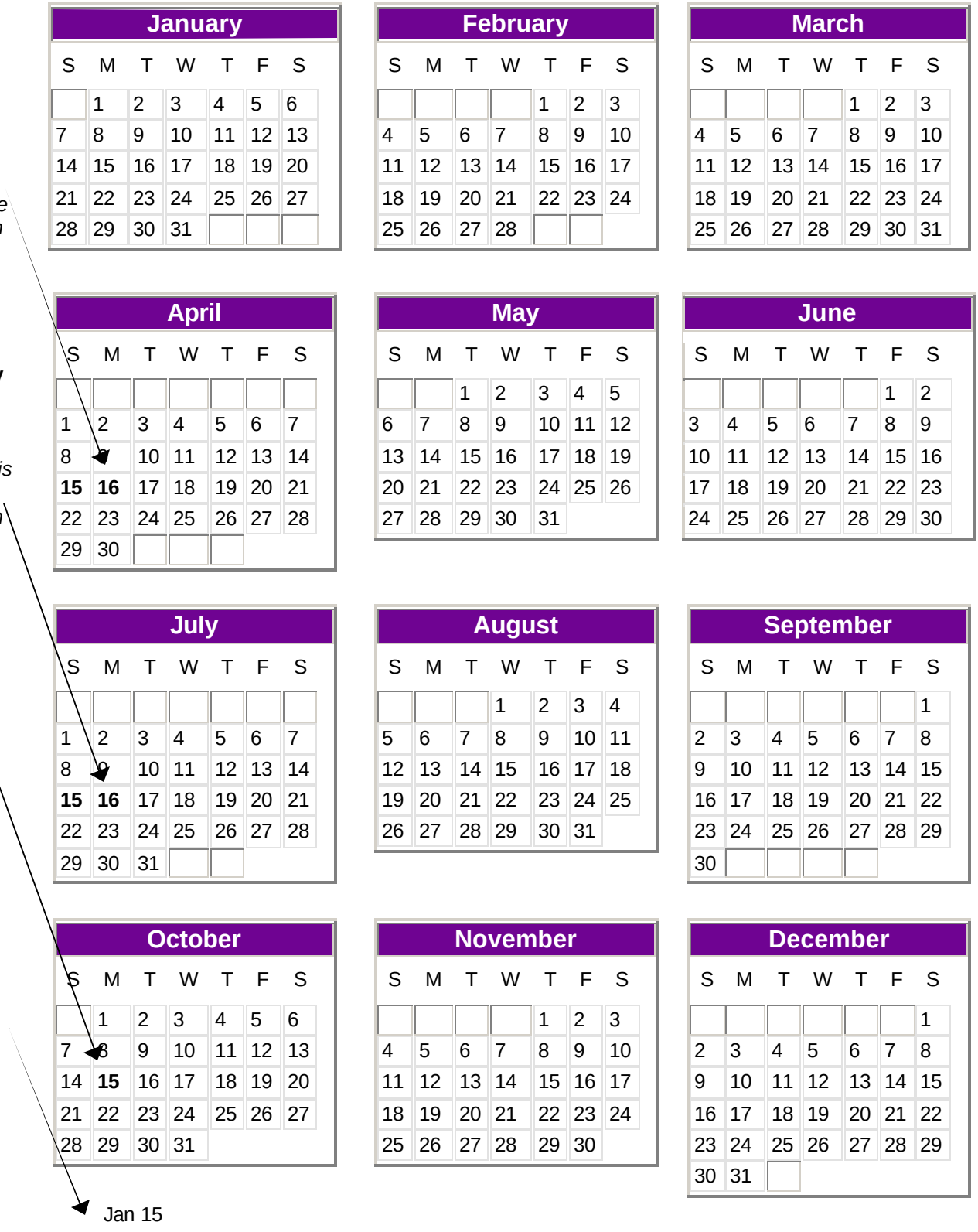
(Since April 15 is a Sunday, the report is due on April 16.)

The **April – June quarterly report** is due July 15.

(Since July 15 is a Sunday, the report is due on July 16.)

The **July – September quarterly report** is due October 15.

The **October – December quarterly report** is due January 15.



Section B – Financial Administration

- Explaining the Project Financial Report Form (Attachment B)
- Guidelines for Completing Budget Categories
- State Travel Regulations – Maximum Grant Reimbursement Amounts
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COMMONWEALTH OF VIRGINIA
Department of Conservation and Recreation

Attachment B
EXPLAINING THIS FORM (RED TEXT)

Project Financial Report Form
Virginia Chesapeake Bay Implementation Grant
DCR Grant Agreement: 2006-WQIA-##

Federal ID # **The Federal ID# is unique. This # is used by DCR in processing payments to grantees.**
Grantee: _____ Invoice Payable To: _____
Contact Person: _____ Phone #: _____
Mailing Address _____

Project Title: _____
Reporting Period: **Enter the period of the reimbursement here; either a quarter or another date range.**

	(beginning date)		(end date)	
Grantees mark an X next to the appropriate quarter period and year.		January - March	X	2006
		April - June		2007
	X	July - September		2008
		October - December		

The "Project Budget" matches the budget in the Scope of Work. The "Project Budget" does not change unless DCR has approved an "Amended" budget, and if so this would be noted as "Amended Project Budget (DATE)".

DCR Funds (Federal or State)

	Project Budget **(A)**	Current Expenditures **(B)**	Cumulative Expenditures **(C.)**	*Unexpended Project Balance **(D)**
Personnel	$ -	$ -	$ -	$ -
Fringe	$ -	$ -	**C = Previous**	**D = A - C**
Travel	$ -	$ -	**Expenditures + B**	$ -
Equipment	$ -	$ -	$ -	$ -
Supplies	**$ 1,000.00**	**$ 200.00**	**$ 500.00**	**$ 500.00**
Contractual	**$ 15,000.00**	**$ 3,000.00**	**$ 7,000.00**	**$ 8,000.00**
Construction	$ -	$ -	**($4,300 in Previous Expenditures)**	
Other Direct	$ -	$ -	$ -	$ -
*TOTAL	$ 16,000.00	$ 3,200.00	$ 7,500.00	$ 8,500.00

***TOTAL = Totals on the bottom and to the right calculate automatically in EXCEL.**

Total Reimbursement Request: **$ 3,200.00** **The amount of the Reimbursement Request is the TOTAL Current Expenditures.**

MATCH Funds

	Project Match Budget	Current Match Expenditures	Cumulative Match Expenditures	*Unexpended Match Balance
Personnel	$ -	$ -	$ -	$ -
Fringe	$ -	$ -	$ -	$ -
Travel	$ -	$ -	$ -	$ -
Equipment	$ -	$ -	$ -	$ -
Supplies	$ -	$ -	$ -	$ -
Contractual	$ -	$ -	$ -	$ -
Construction	$ -	$ -	$ -	$ -
Other Direct	$ -	$ -	$ -	$ -
Indirect	$ -	$ -	$ -	$ -
*TOTAL	$ -	$ -	$ -	$ -

Authorized Signature: **The Attachment B serves as the INVOICE for a grant payment. An authorized person who can verify the expenses are accurate signs this form. The original signed Attachment B is sent to the DCR Project Manager who then forwards it on to the Richmond Office Grant Manager for processing the reimbursement request.**

Date:

*These cells are formulas on the electronic version of this form.

Guidelines for Completing Budget Categories
Project Financial Report Form (Attachment B)

The Project Financial Report Form summarizes the project budget into the budget categories below. For approved projects, in addition to being part of the project application, this form is an element of the grant agreement and is submitted with the quarterly and final reports serving as the projects invoice. This form is used to record a summary of all expenditures and matching funds. Guidelines for determining budget categories for project expenses are below.

Personnel: WQIF grant funds for personnel charges should only be for staff within the project sponsors organization, and for staff members who are directly involved in the project. This category does not include contractual staff. In-kind personnel contributions from project partners may be listed as personnel under the Match funds section of the Attachment B. Use the actual annual salary or hourly wage of project staff to determine expenditures and/or match amounts based on estimated time to be spent working on the project.

Fringe Benefits: In the financial narrative please provide the percentage used for fringe benefits, the basis for its computation, and the types of benefits included.

Travel: Mileage traveled and other costs for travel including lodging and meals. Travel reimbursements are for actual costs based on organization policies, and is not to exceed those included in the *Commonwealth of Virginia Policies & Procedures, Topic No. 20335, State Travel Regulations.* A vehicle mileage rate of $.325/mile is used.

Equipment: Only equipment items valued at more than $5000 per unit should be reported. Items less than $5000 should be listed as supplies.

Supplies: This category includes tangible property items with a per unit cost value of less than $5,000. Supplies must be itemized in the financial narrative.

Contractual: Contractual costs include subcontracted work to be completed by those other than the project sponsor. This may include design and engineering services, legal contracts, easement surveys, analysis of water samples, etc.

Construction: This category includes direct costs related to installation of best management practices and other pollution control measures.

Other Direct: Miscellaneous items. These items must be listed in the financial narrative, in sufficient detail to determine if they are reasonable and allowable.

Indirect: No indirect costs will be funded. Indirect charges may be used as project match. The indirect cost rate must be documented in the match narrative.

State Travel Regulations
Maximum Grant Reimbursement Amounts

The maximum reimbursement amounts under DCR grants for travel related expenditures are based on the Commonwealth of Virginia's Policy & Procedures for State Travel Regulations. The most current version of this travel policy document, Topic No. 20335, is available on the web at, http://www.doa.state.va.us/procedures/AdminServices/capp/summary.htm.

The maximum grant reimbursement amounts noted below for travel related expenditures are based on the State Travel Regulations dated January 17, 2006. Organizations with their own established travel related expenditure rates should use their own rates in the submission of grant reimbursement requests, to the extent that they do not exceed the state rates. All travel related expenses must be reasonable, necessary, and directly related to the grant project.

Maximum Reimbursement Rates

1) **Mileage Rate** = $0.325 / mile

2) **Meal & Incidental Expense Per Diem / Business Meal**

Individual meal maximum rates for approved business meal expense reimbursements are based on the Meal & Incidental Expense Per Diem rates. These rates are provided in the chart below.

TOTAL	$39	$44	$49	$54	$64
Breakfast	$7	$8	$9	$10	$12
Lunch	11	12	13	15	18
Dinner	18	21	24	26	31
Incidentals	3	3	3	3	3
75% Travel Day	$30	$34	$38	$42	$49

The $39 total column is the standard rate. Areas of the state that use rates other then the standard are based on the others columns and these exceptions are provided in the list below.

- **$44** = Cities of Charlottesville, Lynchburg, Roanoke, Warrenton, and Woodbridge; and the counties of Campbell, Fauquier, and Prince William County.
- **$49** = Cities of Chesapeake, Fredericksburg, Norfolk, Portsmouth, Suffolk, and Virginia Beach; and the counties of Spotsylvania, Stafford; Wallop Island in Accomack County
- **$54** = City of Hampton, Newport News, Poquoson, Richmond, and Williamsburg; and the counties of Chesterfield, James City, Goodland, Henrico, and York.
- **$64** = Cities of Alexandria, Fairfax, Falls Church; and the counties of Arlington, Fairfax, and Loudoun.

Business Meals are associated with groups, not individuals. Therefore, DCR requests that business meal budget allocations be listed under the "Other Direct" budget category. The use of DCR grant funds for business meal reimbursements require the following:

- Advance approval from DCR.
- Evidence the meal involves substantive and bona fide discussions (i.e. copy of agenda).
- The original itemized receipt must be provided.
- Listing by name of all persons involved in the meal and the reason for the meal.
- Reimbursement will be for actual expenses up to the Meal & Incidental Expense amount.

Matching Costs - 40 CFR PART 31

Matching or cost sharing requirements may be satisfied by allowable costs incurred by the grantee from other grants or cash donations, or in the value of third party in-kind contributions applicable to the period to which the cost sharing or matching requirement applies.

- Neither costs nor the value of third party in-kind contributions may count towards satisfying a matching requirement of a grant agreement if they have been or will be counted towards satisfying a matching requirement of another grant agreement.

- Costs and third party in-kind contributions counting towards satisfying a matching requirement must be verifiable from the records of the grantee. These records must show how the value placed on third party in-kind contributions was derived. To the extent feasible, volunteer services will be supported by the same methods that the organization uses to support the allocability of regular personnel costs.

Valuation of Donated Services

(1) *Volunteer services.*

Unpaid services provided to a Grantee by individuals will be valued at rates consistent with those ordinarily paid for similar work in the grantee's organization. If the grantee does not have employees performing similar work, the rates will be consistent with those ordinarily paid by other employers for similar work in the same labor market. A reasonable amount for fringe benefits may be included in the valuation.

(2) Employees of other organizations.

When an employer other than a grantee furnishes free of charge the services of an employee in the employee's normal line of work, the services will be valued at the employee's regular rate of pay exclusive of the employee's fringe benefits and overhead costs. If the services are in a different line of work, then the valuation for volunteer service described in the section above applies.

Valuation of Third Party Donations

- Supply contributions will be valued at the market value at the time of donation.

- Use of loaned equipment or space in a building will be valued at the fair rental rate.

The material presented on this page is excerpted and edited from 40 CFR PART 31, Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments and is intended to serve as a reference for DCR Project Managers and Grantees.

Matching Costs – Volunteers & Land

Average Dollar Value of Volunteer Time

Volunteer hours may be applied to the project at rates appropriate to the skill level of the volunteer and/or the nature of the work being performed. Review "Valuation of Donated Service" guidelines on previous page.

If a grantee is not able to determine the volunteer match value based on the price paid for similar work within their organization, then DCR will accept the Virginia Average Hourly Value as determined by the Virginia Employment Commission. This rate is based on the national dollar value of volunteer time as released by the Independent Sector and posted on their web site, www.independentsector.org. The current web site used for annual updates to the Virginia rate is http://www.vaservice.org/volunteer/statistics.html. The Virginia average volunteer value to be used for **adult volunteers** effective for July 2005 through June 2006 is **$18.04 per hour.** This value includes 12 percent for fringe benefits. The appropriate standard value to be used for **children** and volunteers 16 and younger is the state **minimum wage of $5.15.**

Value & Requirements for Use of Land as Match

- The reported value of any tract of land used as match, whether acquired or donated, must be substantiated by an approved appraisal done no more than six months prior to the donation or acquisition.

- Property or easements used by private organizations as a match must also be protected by an easement co-held by a public entity. The co-holder of easements for private organizations must be a state agency or a local government jurisdiction.

- The grantee must include conditions to be placed on any acquired easements. This would include but not be limited to terms of the easement, the amount of development permitted (residential/agricultural, etc.) and any allowed or disallowed land management practices.

Optional Forms for Matching Funds

An Appendix with this manual provides several optional forms that may be used by Project Sponsors in reporting match. The use of these forms is entirely optional.

- Match Tracking Form (Excel)

- Match – Letter of Commitment*

*A letter of commitment to verify match contributions toward a DCR grant, which is provided by an organization other than the project sponsor, is typically required for match contributions at or above $10,000, but may be requested by DCR at anytime and for any amount of match.

Short Overview – Grantee Procurement Guidelines

This document provides a short overview of guidelines to be followed by Project Sponsors for purchases made with grant funding from the Department of Conservation and Recreation. See the Appendix for a more in-depth version of the Grantee Procurement Guidelines. The Virginia General Assembly sets forth the requirements for purchases made with public funds in the *Virginia Public Procurement Act [VPPA], Title 2.2, Chapter 43 of the Code of Virginia.*

Any public body whose governing body has adopted alternative procurement policies to meet the *VPPA* requirements may follow their own established guidelines, assuming they provide for the provisions identified in the *VPPA*. The *VPPA* identifies the following requirements:

- **Small purchase procurements** from $30,000 - $50,000 for goods and services, other than professional services, require the written solicitation of a minimum of four bidders. [For small purchases procurements from $5,000 to $30,000, DCR recommends solicitation of a minimum of four bids.]

- **Competitive sealed bidding** or **competitive negotiation** is required for purchases estimated to be over $50,000; and may be used for lesser amounts.

- Upon a determination in writing that there is only **one source** practicably available for services to be procured, a contract may be negotiated and awarded to that source without competitive sealed bidding or competitive negotiations. [Requires DCR approval.]

- Professional services above $30,000 must be procured by **competitive negotiation**.

Sole Source - The use of **sole source** procurement must be limited to instance where it can be demonstrated that only one source is practicably available. The Project Sponsor must provide a written request to the DCR Project Manager, documenting the determination that there is only one source practicably available. This approval request must explain the following four points:

1) Why is this the only product or service that can meet the needs of the Project Sponsor?
2) Why is this vendor the only practicably available source to obtain this product or service?
3) Why is the price considered reasonable?
4) Describe the efforts that were made to get the best possible price?

Professional Services – Professional services are typically provided by an Architectural / Engineering Firm (A/E) for capital outlay projects and for building planning, construction and renovation projects. Land surveyors, geotechnical engineers, soils engineers, or any service requiring the use of a licensed architect, engineer, or surveyor are by state law considered to be and shall be procured as Professional Services.

Example #1 - Financial Narrative Text Descriptions

Project Sponsor: Big Sandy River Watershed Association
Project Title: *Little Creek Watershed Restoration Project*
Grant Number: 319-2006-26-PT

Reporting Quarter: January 1, 2006 – March 31, 2006
Date Prepared: April 15, 2006
Prepared By: Jane Doe

The Big Sandy River Watershed Association held several programs during this report period, including a water quality monitoring training, 2 educational presentations, and 1 volunteer wetland planting. The association also staffed a booth at the Environment Virginia Conference at VMI where they presented a display on their on-going restoration efforts. In addition the Association continued its efforts to complete a Watershed Implementation Plan for the Little River by holding a strategic planning coordination meeting. 25 members of the association participated in the 3-hr facilitated event.

DCR Funds

Personnel: $2,720 - During this report period the project director coordinated strategic planning activities for the Little River Watershed Plan and held 3 educational programs, 1 water quality monitoring training, attended the VMI Environment Virginia Conference, and held 1 volunteer wetland planting. 160 hours @ $17 / hour

Fringe: $680 - 25% of Personnel

Supplies: $1000 - Included project director registration for the VMI Environment Virginia Conference ($250), booth fee for the BSRWA display at Environment Virginia ($100), printing and mailing of invitations to educational activities (Kinko's $50, US Post Office $100), purchase display board for conference booth ($500 to Booths-R-Us).

Travel: $255 - Expenses for the project director to travel to/from the VMI conference (400 miles @ $0.325/mil = $130), food for coordinator at conference (per diem $30 day x 2 days = $60), and hotel for two nights ($65/night =$130 hotel and tax).

Other Direct: $2,000 - A staff member from the Canaan Valley Institute facilitated a Watershed Plan strategic planning event for the association. Fee included materials preparation in advance, and a report following the event.

Match Funds

Supplies: $1,000 - Supplies for the wetland planting donated by the Big Plant Store, Inc. This included shovels, hoes for planting, work gloves, and plant stakes.

Construction: $3,000 - Wetland plants purchased with grant for local Audubon Society chapter.

EXAMPLE #2 - FINANCIAL NARRATIVE
USING OPTIONAL FORM - EXCEL

Shaded cells on this EXCEL spreadsheet calculate automatically.

Sections below numbered 1 - 8 are for reporting DCR Grant Fund Expenditures.

This form cover the reporting period beginning:	1-Jul-07	ending:	30-Sep-07

1. PERSONNEL (Grantee Staff Salaries or Wages)

Individual	Position	Hourly Rate	Hours	Total
Joseph Franklin	Project Manager	$ 21.50	48.00	$ 1,032.00
Marie Smith	Administrative Assistant	$ 14.00	12.00	$ 168.00
				$ -
				$ -
			Personnel Subtotal	**$ 1,200.00**

2. BENEFITS

35 % fringe benefit rate for Mr. Franklin	$ 361.20
7.65 % fringe benefit rate for Ms. Smith	$ 12.85
	$ -
Benefits Subtotal	**$ 374.05**

3. TRAVEL

Mileage	240	miles @	$ 0.33	per mile	=	$ 78.00
Meals					=	$ -
Lodging		nights @		per night	=	$ -
				Travel Subtotal		**$ 78.00**

4. EQUIPMENT (Over $5,000) - *Identify equipment type/name and vendor*

	$ -
	$ -
Equipment Subtotal	**$ -**

5. SUPPLIES - Identify vendor and describe *supplies purchased*

Great Graphics - Two 24" h x 30" w signs for demo sites, $500 each	$ 1,000.00
Kinkos - Photocopies of workshop materials, and materials for mailing	$ 68.00
U.S. Postal Service - 200 stamps @ $0.39 / each	$ 78.00
	$ -
Supplies Subtotal	**$ 1,146.00**

6. CONTRACTUAL

(Non-contruction-contractors - e.g. consultants, contractual printing, ect.)

Design and survey --- J & R Consultants, preliminary site design	=	$ 7,000.00
Water sample analyses ---	=	$ -
Permitting costs ---	=	$ -
Other	=	$ -
Contractual Subtotal		**$ 7,000.00**

7.	**CONSTRUCTION (Contractors and materials)**					
	Construction Personnel					
	Individual	Position		Hourly Rate	Hours	Total
						$ -
						$ -
						$ -
						$ -
	Materials *(i.e. rock fill, pipes, geotextiles, valves and fittings, water-level control sturctures, trees, plants, etc.)* - *Identify supplie/vendor, items, and quantity, and vendor*					
						$ -
	Fox Ridge Nursery - 30, 2-3' plants ($7.50/each) & 50, 6-12" plants ($4.50/each)					$ 450.00
						$ -
						$ -
	Other Construction Activities					
	Grubbing / clearing				=	$ -
	Mobilization / demobilization				=	$ -
	Revegetation				=	$ -
	Excavation and earthfill				=	$ -
	Other				=	$ -
				Construction Subtotal		**$ 450.00**
8.	**OTHER DIRECT** - *Describe expenses and service providor or vendor*					
	Blue Ridge Institute - preparation, facilitation, and follow-up for meeting					$ 1,500.00
	Downtown Deli - business meal for workgroup meeting, 14 persons					$ 115.50
						$ -
						$ -
				Other Direct Subtotal		**$ 1,615.50**
				DCR GRANT EXPENDITURE TOTAL		**$ 11,863.55**
IN-KIND / MATCH CONTRIBUTION - *Identify source and describe match*						
	Chesapeake Bay Restoration Fund Grant - Two rain garden sites constructed					$ 9,000.00
	River Nonprofit - 22 volunteers for planting on August 27. Charged at $18.04 / hour x 5 hours					$ 1,984.40
	Nelson Health Department - Technician @ $23 / hour x 36 hours (14 sites)					$ 828.00
	Fox Ridge Nursery - Donation of herbacious plugs and mulch					$ 300.00
						$ -
						$ -
						$ -
						$ -
						$ -
				GRANTEE IN-KIND / MATCH TOTAL		**$ 12,112.40**

Section C – Operation & Maintenance Plans

- Guidelines for Developing Operation & Maintenance Plans
- Landowner Agreement, Template

Guidelines for Developing Operation & Maintenance Plans
DCR Water Quality Improvement Fund Grants

I. General Information

This document provides guidelines for developing operation and maintenance plans required for grant projects administered by the Virginia Department of Conservation and Recreation (DCR). All DCR grant projects with implementation activities are required to have an Operation & Maintenance Plan (O&M Plan) to assure that best management practices (BMPs) continue to serve the intended purpose for which they were constructed.

The DCR Grant Agreement section (13) OPERATION AND MAINTENANCE requires the project sponsor to submit an O&M Plan for the project before the end of the first quarterly reporting period or other data as agreed to by DCR. Depending on the nature of the project, the O&M Plan may be as simple as referencing the Landowner Agreement to be used and identifying or describing the specifications to be followed for the BMP design, construction, and maintenance. Urban stormwater management BMP projects may require a more extensive O&M Plan but this can be simplified by following design, construction, and maintenance procedures outlined in the Virginia Stormwater Management Handbook.

These guidelines provide an overview of landowner agreements with an example agreement, instructions for O&M Plans for agricultural BMPs, details regarding O&M Plans for urban stormwater management practices, and an outline that can be used to develop an O&M Plan.

II. Definitions

- *Operations* = Activities necessary for the BMP to produce desired results.

- *Maintenance* = Activities necessary for upkeep of the BMP. These are activities that allow the BMP to function as intended including routine maintenance, non-routine maintenance, and inspections.

III. Landowner Agreements

Some grant projects offer financial assistance to landowners to implement BMPs. When this is the case, project sponsors must execute an appropriate agreement between them and the landowner(s). The primary purpose of the landowner agreement is to secure permission of access for construction, operation, maintenance, and inspections. Essentially, the landowner is responsible for the long-term maintenance of the BMPs and allowing access for inspection.

Some grant projects may offer compensation to landowners for their participation in a program (i.e. septic tank pump-outs). In these cases, the landowner agreement is used to secure a commitment from the landowner to be a cooperator, as opposed to getting their agreement for allowing access for inspections or to verify the BMPs are being maintained.

An optional condition for a landowner agreement may be to obtain permission to use the site for information and education programs. A project sponsor may pursue this as part of the landowner agreement if there are plans to host an educational program or field day in the near future to promote the type of BMPs being funded by the project.

Landowner agreements must be signed by all parties prior to initiation of construction. Each signature party must receive a copy of the signed landowner agreement. Project sponsors must maintain copies of all landowner agreements associated with DCR grant projects and make these agreements available to DCR staff as attachment to quarterly reports. A template landowner agreement is provided for use and modification by project sponsors (see Reference A).

IV. Agricultural BMP & TMDL Cost-Share Practices

Practices to be funded by DCR grants, which are similar to those included in the Virginia Agricultural BMP & TMDL Cost-Share Programs, should follow requirements similar to those included in the state guidelines outlined in the most recent version of the Virginia Agricultural BMP Manual (cost share manual). The Operation & Maintenance Plan requirements for these practices are addressed by following the cost-share program guidelines. The cost-share manual is accessible from the DCR website, http://www.dcr.virginia.gov/sw/costshar.htm.

The cost-share manual contains policies and specifications for BMPs including riparian forest buffers, nutrient management plan writing, and stream channel stabilization. Section VIII, Total Maximum Daily Load Supplement (TMDL) of this manual provides policies regarding wastewater and on-site sewage disposal systems including septic tank pump-outs, connection to public sewer, repair and/or replacement of failing on-site sewage disposal systems, elimination of straight pipes, and installation of alternative waste treatment systems.

The cost share program manual includes a description, purpose, cost-sharing policies, and rate information for each best management practice. The lifespan of BMPs is often identified under the policies section, and when a BMP lifespan is not available, 10 years should be used. Virginia soil and water conservation districts (SWCDs) use the Cost-Share Request Forms (green forms) with the cost-share program. The green forms are a contract that addresses the requirements for an Operation & Maintenance Plan including access, lifespan, need for maintenance, and so forth. The "Applicants Request" and "Participant Practice Installation Certification" sections of the green forms, which must be signed by the landowner, serve as the Landowner Agreement and address operation and maintenance responsibility.

Project sponsors, other than SWCDs, may use a Landowner Agreement similar to the template on page C-5 to address access, lifespan, and maintenance, in lieu of the cost-share program green forms, and in combinations with the BMP specifications in the cost-share manual, in order to meet the O&M Plan requirements for BMPs funded through DCR project grants.

V. Urban Stormwater Best Management Practices

The O&M Plan for urban stormwater BMP projects must address provisions for design and construction to ensure proper operation of the BMP, and routine and non-routine maintenance so that the BMP continues to perform as designed. Stormwater BMPs should be designed in a manner to minimize the need for maintenance and to reduce the chances of failure. Design guidelines are outlined in the most recent version of the Virginia Stormwater Management (SWM) Handbook. This handbook is available on the web, http://www.dcr.virginia.gov/sw/stormwat.htm#pubs.

Routine maintenance of all stormwater BMPs shall be in accordance to the minimum standards outlined in the VA SWM Handbook. O&M Plans for all urban stormwater BMPs require a Maintenance Plan. The person(s) or organization(s) responsible for maintenance must be designated. Maintenance responsibility may fall to the property owner, homeowner's association, local government, or another. A maintenance agreement may be necessary, which would also include specifications on the responsibility for financing maintenance.

Non-routine maintenance includes maintenance activities that are infrequent, and depending on the BMP type these may be expensive, such as pond dredging or major repairs to stormwater structures. Non-routine maintenance should be performed on an as-needed basis based on information gathering during regular inspections. The O&M Plan should outline the person(s) or organization(s) responsible for inspections of the BMP, including the required frequency of BMP inspection in order to verify that the BMPs are being adequately maintained.

The Chapter 3 Appendix of the Virginia SWM Handbook contains checklists for stormwater BMPs, which may be used for achieving requirements for an O&M Plan. The checklists include design and plan review checklist, construction inspection and as-built checklist, and operation and maintenance inspection checklists. The Appendix is organized as follows:

- Appendix 3A – Introduction – Checklists
- Appendix 3B – Detention, Retention and Impoundment BMPs
- Appendix 3C – Infiltration BMPs
- Appendix 3D – Intermittent Sand Filters
- Appendix 3E – Bioretention

O&M Plans for urban SWM practices will be met my following the minimum standards for BMPs in the Virginia SWM Handbook, by having a sufficient maintenance plan (or maintenance schedule), and as is appropriate, a Maintenance Agreement or a Landowner Agreement. It should also be noted that the lifespan of urban BMPs is often for as long as the BMP continues to be used to meet the stormwater management needs of the site for which it was originally constructed. However, for the enforcement aspect of the DCR grants, unless specified otherwise, the standard lifespan for stormwater BMPs is ten years, recognizing that the BMP should continue to be maintained for as long as it is used to meet the SWM needs of the site for which it was constructed.

VI. Operation & Maintenance Plan – Outline

The O&M Plan should contain information on the standards to be followed for design and construction of BMPs, normal operating procedures, and maintenance responsibilities. Below is an outline that can be followed in preparing an O&M Plan for a WQIF grant project.

A) Introduction and general information
   1. Name and contact information for responsible organization or individual.
   2. Provide narrative overview describing the site, drainage areas, proposed BMPs.

B) BMP design and construction
   1. Will plans or drawings be used to identify location of BMPs?
   2. Provide design information: design parameters, features, methods and materials of construction, and other key characteristics of BMP to be constructed.
   3. What permits are required for the site? What is the status of acquiring permits? (i.e. sewage disposal system construction permits from the Virginia Department of Health, stormwater general discharge or construction site permits from the DCR, approved erosion and sediment control plan from the locality or DCR, etc.)
   4. What specifications will be followed during construction of BMPs? (i.e. state guidelines, manufacturer's publications, etc.)
   5. Will stormwater calculations be submitted to the locality or DCR for approval?

C) Normal operating procedures
   1. What is the lifespan of the BMP?
   2. What are the normal operating procedures or minimum standards that are required in order for the BMP to produce desired results?
   3. Are BMPs interrelated and if so how does each BMP work with the next one?

D) Maintenance responsibility & plan
   1. Name and contact information for the individuals responsible for maintenance.
   2. Provide copy of the Maintenance Agreement and/or Landowner Agreement that will be used to assign maintenance responsibility and/or to allow access for maintenance or inspection of the BMPs. Provide copy of Landowner Agreement to be used.
   3. Maintenance Plan - Define the maintenance activities or program and schedule to be established to ensure that BMPs continues to operate as intended.
   4. If maintenance funding will be required (particularly for nonroutine maintenance of large SWM BMPs), identify the sources of funds for maintenance, budget category or line item, or a description of procedure to ensure adequate funding.
   5. Identify the persons or organization responsible for inspections of BMP, including the required frequency of inspections to verify BMP is being maintained.

Reference A
Template

(Print on Project Sponsor Letterhead)

LANDOWNER AGREEMENT

The _____ *(Project Sponsor)* has agreed to provide funding through a grant from the Virginia Department of Conservation & Recreation to _____ *(Landowner)* for the purpose of construction of a _____ *(Insert BMP System Description)*.

The Virginia Department of Conservation & Recreation's share of funding for this practice will not exceed ____ %. The landowner agrees that access to the landowner's property will be allowed for the project sponsor and state agency staff to:

- Evaluate site and design options, and to observe construction and operation of the BMP.
- Spot check maintenance during the 10-year life span of the practice.
- Conducting information and education programs (i.e. field days for other landowners and interested persons to observe the operation of the BMPs). *[This condition is optional.]*

Such access to the site shall be secured through consultation with the landowner to determine a mutually agreeable date and time for access. Access for spot checks will be for the projected lifespan of the practice and subject to the same provisions regarding notification for a visit.

The landowner accepts responsibility for the maintenance of the BMP for the duration of its project lifespan. *(Lifespan is based on the Virginia Agricultural BMP Manual, the NRCS Field Office Technical Guide, or other standard specification manual. Where a BMP lifespan is not available, 10 years will be used.)* Any breach of the above terms of this agreement shall lead to the immediate revocation of this agreement. All or part of funding assistance may be required to be refunded, on a straight line pre-rated basis based on the BMP lifespan, if the BMP is removed or not properly maintained during the life of the practice.

_____ _____

Landowner Date

_____ _____

Project Sponsor Date

Section D – NPS Tracking

- NPS Pollution Tracking Data Forms (Attachment D)
- Example #1 - Attachment D, Riparian and Wetland BMP
- Example #2 - Attachment D, Septic Maintenance, Repair, and Installation
- Example #3 - Attachment D, Urban BMP
- Virginia's National Watershed Boundary Hydrologic Unit – Example Map
- Virginia City / County FIPS Codes

NPS Pollution Tracking Data Forms (Attachment D)

General Information:

NPS Pollution Tracking Data Forms are provided as Attachment D of the Grant Agreement for all projects where pollution reduction tracking is possible. Attachment D forms are to be submitted only after the best management practice (BMP) installation projects are completed. Blank digital copies of each of the forms are available as a Microsoft Word file. DCR staff use the tracking data to report pollution reductions to the Virginia General Assembly, EPA Chesapeake Bay Program Office, and other federal or state agencies as may be requested.

These NPS Tracking forms are used to track installation of all project BMP installations including those on farms, urban and riparian projects, residential nutrient management, and septic pump-outs. Each practice installed during the duration of the grant agreement must be reported. Actual pollution reduction will be calculated by DCR. The primary NPS Tracking Forms used for grant projects include:

- Urban BMP Construction and/or Implementation
- Riparian and Wetland BMP Construction and/or Implementation
- Septic System Maintenance, Repair, and Installation Projects
- Mined Land Restoration / BMP Construction
- Agricultural BMP Construction and/or Implementation

NPS Tracking Form Definitions & Explanations:

- **VAHU6** is the four-character code used to represent Virginia's 6th order National Watershed Boundary Dataset hydrologic units (e.g. RD37 or PS56). Maps delineating these units can be found on the web at: http://www.dcr.virginia.gov/sw/hu.htm. An example map is included in this section of the grant manual.

- **UTM** stands for the Universal Transverse Mercator plane coordinate system, which is a method of plotting locations. The UTM provides a more accurate record of where a BMP is located and is more specific than just a county or hydrologic unit. The UTM allows a BMP to be mapped using GIS. The easiest way to collect UTM coordinates is using a GPS system.

- **Describe BMP** in as much detail as possible. Too much information is better than not enough. DCR must classify practices within narrow parameters and knowing more, allows for more accurate classification and assigning the appropriate NPS reductions.

- **Units of measurement** must be properly noted. Nutrient reductions are typically calculated on a per-acre basis. Practices involving fencing or buffers are reported in linear feet, including the acres benefited by the practice. Urban or stormwater management BMPs must include the drainage area served by the BMP in acres. Septic pump-outs must include the number of systems (homes) pumped out.

Examples of completed NPS Tracking Forms reporting descriptions for various BMPs are included on the following pages.

Attachment D

DCR NPS Pollution Tracking Data Form

Riparian and Wetland BMP Construction and/or Implementation

(EXAMPLE #1)

COMMONWEALTH OF VIRGINIA
Department of Conservation and Recreation
Division of Soil and Water Conservation

Project Title:		**Submitted by:**		**Phone:**	
Project Sponsor:		**Address:**			
Grant Agreement #:				**Reporting Period:**	**Oct 1, 2005 – Sept 30, 2006**

	Site Name	Spec No. State/Federal (as applicable) (A) see note at bottom with state spec #s	*City/County/FIPS Code	*VAHU6 Code	USGS Topo Map Name (Quad)	Site Location UTM Row (Y)	Site Location UTM Column (X)	*Current Land use (Please provide as much detail as possible. Specify rural or urban, etc.)
1	**Brandon Woods Subdivision (along Mill Creek)**	**FR-3**	**James City County (095)**	**JL3B**				**Urban residential area**
2	**Powhatan Creek Park (along Powhatan Creek)**	**WP-2A**	**James City County (095)**	**JL31**				**Urban recreational area, relatively undeveloped**
3	**Southern end of Fox Mill Shopping Center, within 30 feet of Fox Mill Run creek**	**WQ-6B**	**Gloucester County (073)**	**CB14**				**Unpaved end of parking lot in urbanized area**

	*Project Description (Streambank stabilization or restoration, wetland restoration, etc. Riparian buffers: please indicate whether grassed or forested)	*Units (As applicable) Acres/Linear feet/Other (if linear feet, specify buffer width also)	*Drainage Area/Acres Treated (Uplands)	Installation Date	Design Life Span
1	**Riparian buffer planted, ~ 500 trees planted**	**50’ wide along 5 acres**	**~ 300 acres**	**March 16, 2006**	
2	**Streambank stabilization, planted with over 5000 wetland plants**	**1,000 linear feet, 25 foot buffer**	**10 acres**	**April 2, 2006**	
3	**Wetland Restoration**	**30’ x 100’ x 3’ = 9,000 cubic feet**	**4 acre**	**September 2, 2006**	

Form revised 3/21/03 --- Sections marked with an * are required.

(A) State specification numbers (from VA Agricultural BMP Manual):
FR-3 = Riparian Buffer Planting
WP-2A = Streambank Stabilization
WQ-6B = Wetland Restoration

Attachment D

WQIA NPS Pollution Tracking Data Form

Septic Maintenance, Repair, and Installation Projects

(EXAMPLE #2)

COMMONWEALTH OF VIRGINIA
Department of Conservation and Recreation
Division of Soil and Water Conservation

Project Title:		**Submitted by:**		**Phone:**	
Project Sponsor:		**Address:**			
Grant Agreement #				**Reporting Period:**	

	*Major repair or replacement, construction and installation of alternative systems, connection to municipal treatment facility, denitrification systems (please provide detail about work done)	*City/County FIPS Code	*VAHU6 Code	U.S.G.S. Topo Name (Quad)	Site Location (UTM)		Life Span (yrs)	Practice Installation Certification	
					Row (Y)	Column (X)		Technician Name	Date
1	Septic tank repair (clogged line and malfunctioning distribution box)– Martin	Essex Co. (057)	RA60				25	M. Smith	2/27/06
2	Straight pipe elimination, public sewer connection – Stewart	Amherst Co (009)	JM01				50	T. Michaels	4/16/06
3	Straight pipe elimination, construction of drainfield – Wilson	Wise Co. (195)	TC18				25	G. Freeman	5/07/06
4	Septic system replaced with alternative engineered system - Jones	Wise Co. (195)	TC18				25	G. Freeman	5/07/06
5	Five (5) failing systems corrected, repaired with decentralized system – Strawberry Street	Caroline Co. (033)	YO50				20	L. Lancaster	5/22/06

	*Septic tank maintenance (pump-outs): total number per reporting period per Hydrologic Unit-report gallons pumped or number of systems Minor repairs: please provide detail about work done	*City/County FIPS Code	*VAHU6 Code	USGS Topo Map Name (Quad)
1	78 systems pumped	Buchanan County (027)	BS16	
2	38 systems pumped	Westmoreland County (193)	PL68	
3	42 systems pumped	Westmoreland County (193)	PL70	
4				
5				

Revised 10/23/02 --- Sections marked with an * are required.
DCR Form WQIA-Septic BMP

Attachment D

DCR NPS Pollution Tracking Data Form

Urban BMP Construction and/or Implementation

(EXAMPLE #3)

COMMONWEALTH OF VIRGINIA
Department of Conservation and Recreation
Division of Soil and Water Conservation

Project Title:		**Submitted by:**		**Phone:**	
Project Sponsor:		**Address:**			
Grant Agreement #				**Reporting Period:**	**Oct 1, 2005 – Sept 30, 2006**

	*BMP Name and/or Specification (stormwater management facilities-specify type; erosion and sediment control; urban nutrient management)	*City /County FIPS Code	*VAHU6 Code	USGS Topo Map Name (Quad)	Site Location (UTM)	
					Row (Y)	Column (X)
1	**Bioretention area (or rain garden)**	**Fairfax County (059)**	**PL45**			
2	**Grassed swale**	**Nelson County (125)**	**JM40**			
3	**Pervious parking surface, Gravelpave**	**Lynchburg (680)**	**JM10**			
4	**Green roof**	**Norfolk (710)**	**JL57**			

	*Units Acres/Linear ft./Other (specify)	*SWM Acres Treated (i.e. drainage area) Indicate acres or % of area treated that is pervious, impervious	Life Span (yrs)	Installation Date	Residential Urban Nutrient Management			
					# Homes	Total Acreage	Average Post N Application	Average Post P Application
							N lbs/yr	P lbs/yr
1	**30’ W x 16’ L = 480 square feet surface area. (> 2.5 % of impervious area being treated, per the VA SWM Handbook for treating a volume equal to the first 0.5” o.f runoff with phosphorus removal rate of 50%.)**	**Approx. 1 acre (40% imp, 60% per.)**		**September 2006**				
2	**2 swales each 20’ W x 135’L x 4’ D; 5,400 cubic ft x 2 swales=10,800 cu. ft.**	**Approx. 2.5 acres (100% imp.)**		**March 2006**				
3	**40,000 square feet**	**40,000 sq. ft. (100% pervious)**	**15-20 yrs**	**April 2006**				
4	**6,000 square feet**	**6,000 sq. ft. (85% imp, 15% per)**	**40 yrs**	**June 2006**				

Form revised 03/21/03 --- Sections marked with an * are required.

Virginia City / County FIPS Codes

Federal information processing standards codes (FIPS codes) are a standardized set of numeric or alphabetic codes issued by the National Institute of Standards and Technology (NIST) to ensure uniform identification of geographic entities through all federal government agencies.

County Name	FIPS Code
ACCOMACK	001
ALBEMARLE	003
ALEXANDRIA (CITY)	510
ALLEGHANY	005
AMELIA	007
AMHERST	009
APPOMATTOX	011
ARLINGTON	013
AUGUSTA	015
BATH	017
BEDFORD	019
BEDFORD (CITY)	515
BLAND	021
BOTETOURT	023
BRISTOL (CITY)	520
BRUNSWICK	025
BUCHANAN	027
BUCKINGHAM	029
BUENA VISTA (CITY)	530
CAMPBELL	031
CAROLINE	033
CARROLL	035
CHARLES CITY	036
CHARLOTTE	037
CHARLOTTESVILLE (CITY)	540
CHESAPEAKE (CITY)	550
CHESTERFIELD	041
CLARKE	043
CLIFTON FORGE (CITY)	560
COLONIAL HEIGHTS (CITY)	570
COVINGTON (CITY)	580
CRAIG	045
CULPEPER	047
CUMBERLAND	049
DANVILLE (CITY)	590
DICKENSON	051
DINWIDDIE	053
EMPORIA (CITY)	595
ESSEX	057
FAIRFAX	059
FAIRFAX (CITY)	600
FALLS CHURCH (CITY)	610
FAUQUIER	061
FLOYD	063
FLUVANNA	065
FRANKLIN	067
FRANKLIN (CITY)	620
FREDERICK	069
FREDERICKSBURG (CITY)	630
GALAX (CITY)	640
GILES	071
GLOUCESTER	073
GOOCHLAND	075
GRAYSON	077
GREENE	079
GREENSVILLE	081
HALIFAX	083
HAMPTON (CITY)	650
HANOVER	085
HARRISONBURG (CITY)	660
HENRICO	087
HENRY	089
HIGHLAND	091
HOPEWELL (CITY)	670
ISLE OF WIGHT	093
JAMES CITY	095
KING AND QUEEN	097
KING GEORGE	099
KING WILLIAM	101

LANCASTER	103
LEE	105
LEXINGTON (CITY)	678
LOUDOUN	107
LOUISA	109
LUNENBURG	111
LYNCHBURG (CITY)	680
MADISON	113
MANASSAS (CITY)	683
MANASSAS PARK (CITY)	685
MARTINSVILLE (CITY)	690
MATHEWS	115
MECKLENBURG	117
MIDDLESEX	119
MONTGOMERY	121
NELSON	125
NEW KENT	127
NEWPORT NEWS (CITY)	700
NORFOLK (CITY)	710
NORTHAMPTON	131
NORTHUMBERLAND	133
NORTON (CITY)	720
NOTTOWAY	135
ORANGE	137
PAGE	139
PATRICK	141
PETERSBURG (CITY)	730
PITTSYLVANIA	143
POQUOSON (CITY)	735
PORTSMOUTH (CITY)	740
POWHATAN	145
PRINCE EDWARD	147
PRINCE GEORGE	149
PRINCE WILLIAM	153
PULASKI	155
RADFORD (CITY)	750
RAPPAHANNOCK	157
RICHMOND	159
RICHMOND (CITY)	760
ROANOKE	161
ROANOKE (CITY)	770
ROCKBRIDGE	163
ROCKINGHAM	165
RUSSELL	167
SALEM (CITY)	775
SCOTT	169
SHENANDOAH	171
SMYTH	173
SOUTH BOSTON (CITY)	780
SOUTHAMPTON	175
SPOTSYLVANIA	177
STAFFORD	179
STAUNTON (CITY)	790
SUFFOLK (CITY)	800
SURRY	181
SUSSEX	183
TAZEWELL	185
VIRGINIA BEACH (CITY)	810
WARREN	187
WASHINGTON	191
WAYNESBORO (CITY)	820
WESTMORELAND	193
WILLIAMSBURG (CITY)	830
WINCHESTER (CITY)	840
WISE	195
WYTHE	197
YORK	199

Virginia City / County FIPS Codes

Federal information processing standards codes (FIPS codes) are a standardized set of numeric or alphabetic codes issued by the National Institute of Standards and Technology (NIST) to ensure uniform identification of geographic entities through all federal government agencies.

Section E – Other Information

- Quality Assurance Project Plan (For water quality monitoring projects.)
- Acknowledgements & Logos
- IRS Form 1099

Quality Assurance Project Plans – An Overview

(For water quality monitoring projects)

A Quality Assurance Project Plan, or QAPP, is a written document outlining the quality assurance and quality control (QA/QC) procedures a monitoring project will use to ensure the data it collects and analyzes meets project requirements. By law, any U.S. Environmental Protection Agency (EPA)-funded monitoring project must have an approved QAPP before it begins collecting samples. This requirement ensures that the data collected is of known and suitable quality and quantity.

To meet this requirement, DCR grants that contain water quality monitoring activities and that receive federal funding from the EPA's Section 319 Grant or the Chesapeake Bay Implementation Grant, require a QAPP that is approved by DCR. The Project Sponsor must implement the approved QA/QC in performing environmental monitoring activities. **No water quality monitoring activities may be initiated or will expenses be paid until the QAPP has been approved by DCR.**

QAPP Development:

If an organization already has a QAPP approved by EPA, DCR or the Virginia Department of Environmental Quality (DEQ), Project Sponsors need only provide a signed and approved copy of this QAPP to meet these requirements. For those projects that intend to follow a monitoring protocol established by another entity with a current and approved QAPP (e.g., Virginia Save Our Streams, Alliance for the Chesapeake Bay), then this document should be referenced in the new project QAPP.

For those organizations who need to develop a QAPP, the EPA provides guidance on the 24 elements of a QAPP in the publication, *EPA Requirements for Quality Assurance Project Plans* (EPA QA/R-5, March 2001). This publication is on the web, http://www.epa.gov/quality/qs-docs/r5-final.pdf. Although 24 elements comprise a QAPP, not all elements necessarily apply to all projects. Volunteer monitoring programs using test kits for physical or chemical parameters can also use the EPA publication, *The Volunteer Monitor's Guide to Quality Assurance Project Plans* as a reference in developing a QAPP. This *Guide* is on the web, http://www.epa.gov/volunteer/qappcovr.htm.

DCR provides a checklist for developing a QAPP as well as a generic QAPP Optional Form in Appendix C of this manual, which may be used in developing a QAPP for a DCR grant project.

QAPP Submission and Approval:

1) ***Monitoring only projects*:** For grants projects that are only for monitoring activities, the QAPP must be submitted to the DCR Project Manager with the scope of work and/or project proposal. The DCR grant manager will approve a QAPP before the Grant Agreement is effective.

2) ***Monitoring sub-projects:*** For grant projects where a monitoring project is part of a larger project, the QAPP should be submitted to DCR Project Manager within thirty (30) days of the effective date of the Grant Agreement.

Upon receiving the QAPP, the DCR Project Manager forwards a copy to the Grant Manager for review. Within thirty (30) days, the DCR Project Manager will be notified that the QAPP has been approved, conditionally approved, or not approved. A conditional approval will allow monitoring to begin even though some deficiencies were noted in the plan. The DCR Project Manager will receive written notification on the deficiencies found and they are responsible for forwarding this information to the Project Sponsor and verifying that a revised plan is submitted within thirty (30) days.

Acknowledgements & Logos

The role of DCR and the federal funding agency (EPA or NOAA) must be clearly stated on all press releases, news articles, request for proposals, bid solicitations and other documents describing this project, whether funded in whole or part. Acknowledgment of financial assistance, with the DCR and federal agency logo, must be printed on the cover of all reports, studies, web sites, map products, and other products supported by this award or any sub-award. Examples of acknowledgements for DCR grant programs are below.

EPA Chesapeake Bay Implementation Grant:

This project received funding from the Environmental Protection Agency's Chesapeake Bay Program at the Virginia Department of Conservation and Recreation, via grant agreement number BAY-2006-##-SR.

EPA Section 319 / Nonpoint Source Implementation Program:

This project received funding from the Environmental Protection Agency's Section 319 Grant Program at the Virginia Department of Conservation and Recreation (DCR), grant number 319-2006-##-SR.

NOAA Coastal Nonpoint Program:

This project was funded by the Virginia Coastal Program at the Department of Environmental Quality through Grant #NA######## of the National Oceanic and Atmospheric Administration, Office of Ocean and Coastal Management, under the Coastal Zone Management Act of 1972, as amended. This project was conducted as part of the Coastal Nonpoint Source Pollution Control Program as administered by the Department of Conservation and Recreation.

Virginia Water Quality Improvement Fund:

This project received funding from the Virginia Water Quality Improvement Fund provided by the Virginia Department of Conservation and Recreation (DCR), via grant number WQIA-2006-##.

Disclaimer:

For reports or papers for public distribution (including the final product), the following sentence must be added to the end of the above credit: *The views expressed herein are those of the author(s) and do not necessarily reflect the views of DCR.*

IRS Form 1099

It is not the Department of Conservation and Recreation's position to interpret tax laws and regulations. The information provided on this page is offered to guide grantees on the tax requirements associated with grant funds. This page was drafted in April 2006. Grantees are advised to contact a legal expert on tax law interpretation and for current tax requirements.

- Grantees are required to deliver an IRS Form 1099 to any independent contractor who provides $600 or more of services per their federal taxpayer identification number or social security number during the calendar year. This includes payments to sole proprietors / individuals (not employees), partnerships, limited liability companies, and nonprofit organizations. Payments to corporations are not reportable.

- Grantees must also file the IRS Form 1099 with the Internal Revenue Service in accordance with IRS regulations.

- The appropriate IRS 1099 forms must be distributed to recipients by January 31 and to the IRS by February 28. If the date listed falls on a Saturday, Sunday, or legal holiday, the due date is the next business day.

- The IRS provides detailed information on what to report on the various 1099 forms. DCR offers the following excerpts from the IRS Guide to Information Returns to be used to guide grantees in selecting the appropriate 1099 form for payments to others.

    - Form 1099-G, Certain Government Payments – This form is used to report "… state and local income tax refunds, agricultural payments, and taxable grants."

      The Virginia Agricultural BMP Cost-Share Manual recommends that SWCDs use this form to report recipient income from agricultural & TMDL cost-share BMPs.

    - Form 1099-MISC, Miscellaneous Income – This form is used to report "payments for services performed for a trade or business by people not treated as its employees. Examples: Fees to subcontractors or directors…."

Appendix I – Optional Forms

- Financial Narrative Form (Excel)
- Match Tracking Form (Excel)
- Sample – Letter of Commitment for Match Funds
- Procurement Bid Solicitation Form
- Form for Developing Operational & Maintenance Plan

DCR GRANT MANAGEMENT
FINANCIAL NARRATIVE FORM - EXCEL
(Use of this form is Optional)

Shaded cells on this EXCEL spreadsheet calculate automatically.

Sections below numbered 1 - 8 are for reporting DCR Grant Fund Expenditures.

This form cover the reporting period beginning: _____ ending: _____

1. PERSONNEL (Grantee Staff Salaries or Wages)

Individual	Position	Hourly Rate	Hours	Total
				$ -
				$ -
				$ -
				$ -
			Personnel Subtotal	**$ -**

2. BENEFITS

	$ -
	$ -
	$ -
Benefits Subtotal	**$ -**

3. TRAVEL

Mileage		miles @		per mile	=	$ -
Meals					=	$ -
Lodging		nights @		per night	=	$ -
				Travel Subtotal		**$ -**

4. EQUIPMENT (Over $5,000) - *Identify equipment type/name and vendor*

	$ -
	$ -
Equipment Subtotal	**$ -**

5. SUPPLIES - *Identify vendor and describe supplies purchased*

	$ -
	$ -
	$ -
	$ -
Supplies Subtotal	**$ -**

6. CONTRACTUAL

(Non-contruction-contractors - e.g. consultants, contractual printing, ect.)

Design and survey ---		=	$ -
Water sample analyses ---		=	$ -
Permitting costs ---		=	$ -
Other		=	$ -
	Contractual Subtotal		**$ -**

7.	**CONSTRUCTION (Contractors and materials)**					
	Construction Personnel					
	Individual	Position		Hourly Rate	Hours	Total
						$ -
						$ -
						$ -
						$ -
	Materials *(i.e. rock fill, pipes, geotextiles, valves and fittings, water-level control sturctures, trees, plants, etc.)* - *Identify supplies/vendor, items, and quantity.*					
						$ -
						$ -
						$ -
						$ -
	Other Construction Activities					
	Grubbing / clearing				=	$ -
	Mobilization / demobilization				=	$ -
	Revegetation				=	$ -
	Excavation and earthfill				=	$ -
	Other				=	$ -
				Construction Subtotal		**$ -**
8.	**OTHER DIRECT** - *Describe expenses and service providor or vendor*					
						$ -
						$ -
						$ -
						$ -
				Other Direct Subtotal		**$ -**
				DCR GRANT EXPENDITURE TOTAL		**$ -**
IN-KIND / MATCH CONTRIBUTION - *Identify source and describe match*						
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
				GRANTEE IN-KIND / MATCH TOTAL		**$ -**

Match Tracking Form - EXCEL
Personnel / Volunteer Time & Financial Contributions
(Use of this form is Optional)

DCR Grant Agreement Number: Tracking Form Page #: ________

Grantee Name:

Date	Contributing Organization	Name of Person	Activity	Non-Personnel Dollars Match	Hours Matched	Hourly Rate	Total Value
							$ -
							$ -
							$ -
							$ -
							$ -
							$ -
							$ -
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							$ -
							$ -
							$ -
			TOTAL	$ -			

(DCR - 199 - 174) (07/06)
(DCR - SW - 017) (07/06)

LETTERHEAD

Template – Letter of Commitment for Match Funds

DATE: (Insert Date)

TO: Department of Conservation and Recreation

FROM: (Insert name of person authorized to commit time and effort.)

RE: Commitment of matching funds

(Insert name of contributing organization / company) is pleased to support (insert name of project sponsor) in their efforts to implement the grant project, (insert title of project).

As a partner in this endeavor we commit to providing the following resources and services toward the project as match for a grant from the Department of Conservation and Recreation:

- (Insert bulleted list describing the cash and/or in-kind services provided as match, the source of the match, and the value associated with the match commitment.)
- Cash Contribution –
- Technical Support –
- Construction Funding –
- Equipment Rental –

The above items have a total matching contribution of $ (insert total).

Sincerely,

(Insert name)
(Insert title)

BID SOLICITATION FORM
(Use of this form is Optional.)

DCR Grant Number:		**Date Needed:**	
Project Sponsor:		**Quotes Solicited By:**	

Description of Goods or Service to be Provided:
Below, provide a description of the goods or services to be provided or attach a copy of the specifications used with the bid solicitation.

VENDOR DETAILS	**BIDDER #1**	**BIDDER #2**	**BIDDER #3**	**BIDDER #4**
Date Contacted				
Vendor's FIN or SSN				
Vendor's Name				
Vendor Address				
Contact Person				
Phone Number				
Email Address				
FACTORS/BID INFO:	**BIDDER #1**	**BIDDER #2**	**BIDDER #3**	**BIDDER #4**
Labor Costs	$	$	$	$
Materials Costs	$	$	$	$
Total Bid Price	$	$	$	$
Payment Terms				
Performance Period				
Other Information				

Comments: *(Use if unable to obtain four bids or to justify not using low bidder.)*

Appendix II – Procurement

- Grantee Procurement Guidelines

GRANTEE PROCUREMENT GUIDELINES

I. GENERAL INFORMATION

This document provides guidelines to be followed by Project Sponsors for purchases made with grant funding from the Department of Conservation and Recreation. The guidelines are organized by purchases of goods and nonprofessional services, purchases of professional services, Virginia Public Procurement Act exemptions, and references.

Public purchasing embraces a fundamental obligation to the general public to ensure that procurements are accomplished in accordance with the intent of the laws. The intent of the Virginia General Assembly is set forth in the *Virginia Public Procurement Act [VPPA], Title 2.2, Chapter 43 of the Code of Virginia.* According to the VPPA, all public contracts with nongovernmental contractors for the purchase or lease of goods, or for the purchase of services, insurance, or construction, shall be awarded after competitive sealed bidding, or competitive negotiation as required by the VPPA, unless otherwise authorized by law.

To the end that public bodies in the Commonwealth obtain high quality goods and services at reasonable cost, that all procurement procedures be conducted in a fair and impartial manner, it is the intent of the General Assembly that competition be sought to the maximum feasible degree, that procurement procedures involve openness and administrative efficiency, that individual public bodies enjoy broad flexibility in fashioning details of such competition, and that specifications reflect the procurement needs of the purchasing body rather than being drawn to favor a particular vendor. [*Excerpted content from the VPPA.]*

Any public body whose governing body has adopted alternative procurement policies to meet the *VPPA* requirements may follow their own established guidelines, assuming they provide for the provisions identified in the *VPPA*. The *VPPA* identifies the following requirements:

- **Small purchases procurements** from $30,000 - $50,000 for goods and services, other than professional services, require the written solicitation of a minimum of four bidders.

- **Competitive sealed bidding** or **competitive negotiation** is required for purchases estimated to be over $50,000; and may be used for lesser amounts.

- Upon a determination in writing that there is only **one source** practicably available for services to be procured, a contract may be negotiated and awarded to that source without competitive sealed bidding or competitive negotiations. [Requires DCR approval.]

- Professional services above $30,000 must be procured by **competitive negotiation**.

II. GOODS AND NONPROFESSIONAL SERVICES

Virginia procurement guidelines emphasize the use of competition to the maximum feasible degree. The use of sole source procurements must be limited to instances where it can be demonstrated that only one source is practicably available. Acceptable procurement methods and the associated *VPPA* thresholds and requirements to be followed for the purchase of goods and nonprofessional services with grant funding from the DCR are identified in this section. Definitions for goods and nonprofessional services are below. The nonprofessional services definition is provided as it pertains to building planning, construction and renovation projects.

- **Goods:** All material, equipment, supplications, printing, and automated data processing hardware and software.

- **Nonprofessional Services:** Cost consultants, soils testing, concrete testing, project management, project administration, and other services that may be performed by either licensed or non-licensed architects, engineers or others are considered to be Nonprofessional Services. [*Virginia Construction & Professional Services Manual*.]

A. Small Purchase Procurements (Not to Exceed $50,000)

Small purchase procedures for single or term contracts for goods and services other than professions services not expected to exceed $50,000 shall provide for competition wherever practicable. Small purchase procedures that are expected to exceed $30,000 require the written informal solicitation of a minimum of four bids or offers.

- Over $5,000 to $30,000 – Follow procedures established by the public body. Solicitation of a minimum of four bidders is recommended.

- Over $30,000 to $50,000 – *VPPA* requires the written informal solicitation of a minimum of four bidders. See example bid solicitation form.

B. Competitive Sealed Bidding (Over $50,000; And As Preferred)

Purchases of goods and nonprofessional services that will be over $50,000 must use the following procedures for competitive sealed bidding. Purchases under $50,000 may select to use this method as preferred.

1) Issue a written Invitation for Bid (IFB) containing or incorporating by reference the specifications, contractual terms and conditions, and any requisite qualifications.

2) Posting of public notice for at least 10 workdays in designated area, or publication in a newspaper of general circulation, or both.

3) Public opening and announcement of all bids received.

4) Evaluate all bids based upon requirements set forth in the IFB.

5) Award to the lowest responsive and responsible bidder.

Competitive bidding is the preferred method for acquiring goods and nonprofessional services for public use when the estimated cost is over $50,000. If a competitive bidding is not practicable or fiscally advantageous then competitive negotiation may be used. Details on competitive negotiation guidelines are provided under the Professional Services section that follows.

C. Sole Source

The use of **sole source** procurement must be limited to instance where it can be demonstrated that only one source is practicably available. Competition is not available in a sole source situation. Sole source procurements require written approval from DCR before work can begin. DCR will consider approval of contractor selection based on a previously conducted solicitation or other procedures used as is appropriate and as it directly pertains to the grant-funded project. For sole source approvals, the Project Sponsor must provide a written request to the DCR Project Manager, documenting the determination that there is only one source practicably available. The sole source approval request must address the following four points:

1) Explain why this is the only product or service that can meet the needs of the Project Sponsor?

2) Explain why this vendor is the only practicably available source from which to obtain this product or service?

3) Explain why the price is considered reasonable?

4) Describe the efforts that were made to get the best possible price?

III. PROFESSIONAL SERVICES

The *Virginia Public Procurement Act* sets forth the general parameters for the procurement of professional services. Further definition of the requirements for procurement of professional services is provided in the *Commonwealth of Virginia: Construction & Professional Services Manual – 2004, Chapter 4: Procurement Procedures for Professional Services.*

The policy of the Commonwealth is to contract with a single entity in acquiring the full range of disciplines necessary to provide the services identified for the project. Once an Architectural / Engineering Firm (A/E) is selected they generally continue to work on the projects even if there are change requests, up to a cap amount. Two state procurement method options are provided in this section for which professional services to be performed under DCR grant projects are to be solicited. The following definition is used for the types of professional services typically required for capital outlay projects and for building planning, construction and renovation projects.

- **Professional:** Land surveyors, geotechnical engineers, soils engineers, or any service requiring the use of a licensed architect, engineer, or surveyor are by state law considered to be and shall be procured as Professional Services.

A. Small Purchase Professional Service (Less Than $30,000)

The Project Sponsor should follow purchase procedures for professional services as established by the public body. Provide for competition wherever practicable. A recommended approach for contracts less than $30,000 is outlined below based on the *Construction & Services Manual.*

1) Conduct telephone or personal interviews with representatives from three Architectural / Engineering Firms to determine current personnel qualifications, location relative to the work, expertise, workload, capability to meet the proposed schedule, past performance on similar projects and ability to provide the services within budgeted costs.

2) Rank order A/Es or other contractors and negotiate fee for service. Final selection is a judgment call based on the services the firm says they can provide for the given amount. If total fee will be less that $5,000, it is only necessary to call one qualified A/E.

B. Competitive Negotiation (Professional Services Over $30,000)

Competitive negotiation is defined in the Virginia Law in the *Virginia Public Procurement Act* and is used to select contractors for professional services expected to be greater than $30,000, and for smaller amounts as desired. An important aspect of competitive negotiation is that the Project Sponsor uses a qualification, suitability, and capability based selection process. Factors used in the selection process may include technical expertise, previous experience, adequate staffing, and location of the firm. The selection process is then followed by competitive fee negotiations with the selected offeror. The competitive negotiation method includes:

1) Issue a written Request for Proposals (RFP) that contains the specifications, contractual terms and conditions of the procurement, and factors to be used in evaluating proposals. The RFP must include a statement of any requisite qualifications of potential contractors.

2) Pubic notice of the RFP for at least 10 workdays in an area normally used for public notices, and publication in a newspaper of general circulation for the area of the project.

3) Receive, evaluate, and rank the respondents based on criteria listed in the RFP.

4) Interview two or more of the top ranked respondents who are deemed fully qualified, responsible, and suitable to provide the services. These negotiations are intended to elaborate on their qualifications, performance data, expertise, or alternative concepts. Price shall be considered but need not be the sole determining factor.

5) Negotiate fee with the Architectural / Engineering Firm ranked first as to overall suitability and qualifications. If you cannot reach agreement on a fee amount, formally terminate the negotiation in writing, and proceed to the A/E ranked second, third, etc.

IV. VPPA EXEMPTION

The provisions of the *VPPA* do not apply to a number of entities under particular circumstances. Reference Article 3 of the VPPA for the full listing. The exemption of the VPPA provisions pertaining to nonprofit organizations is excerpted below.

> Procurement of any construction or planning and design services for construction by a Virginia nonprofit corporation or organization not otherwise specifically exempted when (i) the planning, design or construction is funded by state appropriations of $10,000 or less or (ii) the Virginia nonprofit corporation or organization is obligated to conform to procurement procedures that are established by federal statutes or regulations, whether those federal procedures are in conformance with the provisions of this chapter [*VPPA*].

V. REFERENCES

- ***Virginia Public Procurement Act.*** Defined by statute in the Code of Virginia. http://www.eva.state.va.us/dps/Manuals/docs/vppa.htm

- ***Virginia Agency Procurement and Surplus Property Manual.*** Published by the Virginia Department of General Services, Division of Purchases and Supply. http://dps.dgs.virginia.gov/dps/Manuals/manuals-bottom.htm

- ***Virginia Construction & Professional Services Manual (2004).*** Published by the Virginia Bureau of Capital Outlay Management. Chapter 4 – Procurement Procedures for Professional Services. http://bcom.dgs.virginia.gov/RDetailPg.aspx?I_PAGE_ID=4

Appendix III – Quality Assurance Project Plans (For water quality monitoring projects)

- Check List – Preparing a Quality Assurance Project Plan (QAPP)
- Elements of a QAPP – Optional Form

Check List – Preparing a Quality Assurance Project Plan (QAPP)

The material in this document is a checklist for preparing a QAPP for all types of water quality monitoring projects. The content on the following pages is excerpted from Chapter 3: Some Basin QA/QC Concepts of *The Volunteer Monitor's Guide to Quality Assurance Project Plans.*

Part A – Project Management (Elements 1 - 9)

1) **Title and Approval Page - N**ames, titles, signatures, and document signature dates of all appropriate approving officials which may include; project manager, project QA officer, the DCR Grant Manager, and the EPA project manager and QA officer.

2) **Table of Contents -** A Table of Contents should include section headings with appropriate page numbers and a list of figures and tables, appendices and attachments.

3) **Distribution List -** List the individuals and organizations that will receive a copy of your approved QAPP and any subsequent revisions. Include representatives of all groups involved in your monitoring effort. Include their contact information

4) **Project / Task Organization -** Identify all key personnel and organizations that are involved in your program, including data users, and list their specific roles and responsibilities. In many monitoring projects, one individual may have several responsibilities. An organizational chart is a good way to graphically display roles.

5) **Problem Identification / Background -** In a narrative, briefly state the problem your monitoring project is designed to address. Include any background information such as previous studies that indicate why this project is needed. Identify the intended use of your data, by whom and how.

6) **Project / Task Description -** In general, describe the work to be performed and where it will take place. Identify what kinds of samples will be taken, what kinds of conditions they will measure, which are critical, and which are of secondary importance. Indicate how you will evaluate your results (how you will be making sense out of what you find). For example, you may be comparing your water quality readings to State or EPA standards, or comparing your macro invertebrate evaluations to State-established reference conditions or historical information. Include an overall project timetable that outlines beginning and ending dates for the entire project as well as for specific activities within the project. Include information about sampling frequency, lab schedules, and reporting cycles.

7) **Data Quality Objectives for Measurement Data -** Data Quality Objectives (DQOs) are the quantitative and qualitative terms you use to describe how good your data need to be to meet your project's objectives. DQOs for measurement data (referred to here as data quality indicators) are precision, accuracy, representativeness, completeness, comparability, and measurement range. Provide information on these indicators, in quantitative terms if possible.
   a. *Precision: is the degree of agreement among repeated measurements of the same characteristic, or parameter, and gives information about the consistency of your methods.*
   b. *Accuracy: is a measure of confidence that describes how close a measurement is to its "true" value.*
   c. *Measurement Range: is the range of reliable readings of an instrument or measuring device, as specified by the manufacturer.*
   d. *Representativeness: is the extent to which measurements actually represent the true environmental condition.*
   e. *Comparability: is the degree to which data can be compared directly to similar studies. Using standardized sampling, analytical methods, and units of reporting helps to ensure comparability.*
   f. *Completeness: is the comparison between the amounts of data you planned to collect versus how much usable data you collected, expressed as a percentage.*

8) **Training Requirements / Certification -** Identify any specialized training or certification requirements needed to successfully complete any tasks. Discuss how you will provide such training, who will be conducting the training, and how you will evaluate performance.

9) **Documentation and Records -** Identify the field and laboratory information and records you need for this project. These records may include raw data, QC Checks, field data sheets, laboratory forms, and voucher collections. Include information on how long, and where, records will be maintained. Copies of all forms to be used in the project should be attached to the QAPP.

Part B - Measurement / Data Acquisition (Elements 10 – 19)

10) **Sampling Process Design -** Outline the experimental design of the project including information on types of samples required, sampling frequency, sampling period (e.g., season), and how you will select sample sites and identify them over time. Indicate whether any constraints such as weather, seasonal variations, and stream flow or site access might affect scheduled activities, and how you will handle those constraints. Include site safety plans. Cite the sections of your program's SOPs (Standard Operating Procedures), which detail the sampling design of the project, in place of extensive discussion.

11) **Sampling Methods Requirements -** Describe your sampling methods. Include information on parameters to be sampled, how samples will be taken, equipment and containers used, sample preservation methods used, and holding times (time between taking samples and analyzing them). If samples are composites (i.e., mixed), describe how this will be done. Describe procedures for decontamination and equipment cleaning. Most of this information can be presented in a table or you may also cite any SOPs that contain this information.

12) **Sample Handling and Custody Requirements -** Sample handling procedures apply to projects that bring samples from the field to the lab for analysis, identification, or storage. These samples should be properly labeled in the field. At a minimum, the sample identification label should include sample location, sample number, date and time of collection, sample type, sampler's name, and method used to preserve sample. Describe the procedures used to keep track of samples that will be delivered or shipped to a laboratory or analysis. Include any chain-of-custody forms and written procedures field crews and lab personnel should follow when collecting, transferring, storing, analyzing, and disposing of samples.

13) **Analytical Methods Requirements -** List the analytical methods and equipment needed for the analysis of each parameter, either in the field or the lab. If your program uses standard methods, cite these. If your program's methods differ from the standard or are not readily available in a standard reference, describe the analytical methods or cite and attach the program's SOPs.

14) **Quality Control Requirements -** List the number and types of field and laboratory quality control samples that will be taken. This information can be presented in a table. If you use an outside laboratory, cite or attach the lab's QA/QC plan. QC checks for biological monitoring programs can be described by narrative, and, if appropriate, should include discussion of replicate sample collection, cross checks by different field crews, periodic sorting checks of lab samples, and maintenance of voucher and reference collections. Describe what actions you will take if the QC samples reveal a sampling or analytical problem.

15) **Instrument / Equipment Testing, Inspection, and Maintenance Requirements -** Describe your plan for routine inspection and preventive maintenance of field and lab equipment and facilities. Identify what equipment will be routinely inspected, and what spare parts and replacement equipment will be on hand to keep field and lab operations running smoothly. Include an equipment maintenance schedule, if appropriate.

16) **Instrument Calibration and Frequency** - Identify how you will calibrate sampling and analytical instruments. Include information on how frequently instruments will be calibrated, and the types of standards or certified equipment that will be used to calibrate sampling instruments. Indicate how you will maintain calibration records and ensure that records can be traced to each instrument. For biological monitoring programs, the procedures for instrument calibration should include routine procedures that ensure that equipment is clean and in working order.

17) **Inspection / Acceptance Requirements for Supplies -** Describe how you determine if supplies such as sample bottles, nets, and reagents are adequate for your program's needs.

18) **Data Acquisition Requirements -** Identify any types of data your project uses that are not obtained through your monitoring activities. Examples include historical information, information from topographical maps or aerial photos, or reports from other monitoring groups. Discuss any limits on the use of this data resulting from uncertainty about its quality.

19) **Data Management** - Trace the path of data management, from field collection and lab analysis to data storage and use. Discuss how you check for accuracy and completeness of field and lab forms, and how you minimize and correct errors in calculations, data entry to forms and databases, and report writing. Provide examples of forms and checklists. Identify the computer hardware and software you use to manage your data.

Part C - Assessment and Oversight (elements 20-21)

20) **Assessments and Response Actions -** Discuss how you evaluate field, lab, and data management activities, organizations (such as contract labs) and individuals in the course of your project. These can include evaluations of volunteer performance; audits of systems such as equipment and analytical procedures; and audits of data quality. Include information on how your project will correct any problems identified through these assessments. Corrective actions might include calibrating equipment more frequently; increasing the number of regularly scheduled training sessions, or rescheduling field or lab activities.

21) **Reports -** Identify the frequency, content, and distribution of reports to data users, sponsors, and partnership organizations that detail project status, results of internal assessments and audits, and how QA problems have been resolved.

Part D - Data Validation and Usability (elements 22-24)

22) **Data Review, Validation and Verification Requirements -** State how you review data and make decisions regarding accepting, rejecting, or qualifying the data. All that is needed here is a brief statement of what will be done, by whom.

23) **Validation and Verification Methods -** Describe the procedures you use to validate and verify data. This can include, for example, comparing computer entries to field data sheets; looking for data gaps; analyzing quality control data such as chain of custody information, spikes, and equipment calibrations; checking calculations; examining raw data for outliers or nonsensical readings; and reviewing graphs, tables and charts. Include a description of how errors, if detected, will be corrected, and how results will be conveyed to data users.

24) **Reconciliation with Data Quality Objectives -** Once the data results are compiled, describe the process for determining whether the data meet project objectives.

Other References and Resources

1. The Volunteer Monitors Guide to Quality Assurance Project Plans.
   http://www.epa.gov/volunteer/qappcovr.htm

2. EPA Requirements for Quality Assurance Project Plans (EPA QA/R-5, March 2001).
   http://www.epa.gov/quality/qs-docs/r5-final.pdf

3. Department of Environmental Quality's Quality Assurance Quality Control program
   http://www.deq.virginia.gov/watermonitoring/qaqc.html
   http://www.deq.virginia.gov/watermonitoring/pdf/wqmpqapp.pdf

4. Virginia Citizen Water Quality Monitoring Program Methods Manual
   http://www.deq.virginia.gov/cmonitor/pdf/cmonman.pdf

Elements of a QAPP – Optional Form

Quality Assurance Project Plans (Use of this form is optional)

Part A – Project Management (Elements 1 - 9)

1) Title and Approval Page

Project title:

Date of the QAPP:

Names of organizations involved in the project:

Project Manager Signature: _____

Name / Date: _____

Project QA Officer Signature: _____

Name / Date: _____

Virginia DCR QA Officer Signature: _____

Name / Date: _____

USEPA Project Manager Signature: _____

Name / Date: _____

2) Table of Contents

List sections with page numbers, figures, tables, references, and appendices (attach pages).

3) Distribution List

List the individuals and organizations that will receive a copy of your approved QAPP. Include representatives of all groups involved in your monitoring effort. Include phone numbers.

A.

B.

C.

D.

E.

F.

G.

4) Project / Task Organization

List key project personnel and their corresponding responsibilities.

Name	Title / Responsibility
	Project Manager
	Advisory Panel (contact person)
	QA Officer
	Field Leader
	Laboratory Leader
	Data Processing Leader

5) Problem Identification / Background

A. Problem Statement:

B. Intended Use of Data:

6) Project / Task Description

A. In general, describe the work to be performed and where it will take place.

B. Identify what kinds of samples will be taken, what kinds of conditions they will measure, which are critical, and which are of secondary importance.

C. Indicate how you will evaluate your results (how you will be making sense out of what you find)..

D. *Project Timetable*

Major Task Category	**J**	**F**	**M**	**A**	**M**	**J**	**J**	**A**	**S**	**O**	**N**	**D**

7) Data Quality Objectives for Measurement Data

A. Data Precision, Accuracy, Measurement Range:

Parameter	Precision	Accuracy	Measurement Range
	+/- %	+/-	to units
	+/- %	+/- mg / L	to mg / l
	+/- %	+/- mg / L	to mg / l
	+/- %	+/- mg / L	to mg / l
	+/- %	+/- mg / L	to mg / l

B. Representativeness*:*

C. Comparability*:*

D. Completeness*:*

Parameter	No. Valid Samples Anticipated	No. Valid Samples Collected & Analyzed	Percent Complete

8) Training Requirements / Certification

Types of Volunteer Training	Frequency of Training	Frequency of Certification

Description of Training and Trainer Qualifications:

9) **Documentation and Records**

Part B - Measurement / Data Acquisition (Elements 10 – 19)

10) Sampling Process Design

Outline the experimental design of the project including information on types of samples required, sampling frequency, sampling period (e.g., season), and how you will select sample sites and identify them over time.

Sample Design Logistics

	Parameter	No. of Samples	Sampling Frequency	Sample Period
Biological				
Physical				
Chemical				

11) Sampling Methods Requirements

Describe your sampling methods

Example: Sample Methods Requirements

Matrix	Parameter	Sampling Equipment	Sample Holding Containers	Method Sample Preservative	Maximum Holding Time
Water	Ph	Jones ph color comparator kit	Screw top, glass sample bottles	None	Immediately
Water	Temperature	Smith armored thermometer	None, measurement taken instream	None	Immediately
Water	Turbidity	Jones turbidity meter	Screw top, glass sample bottles	Store on ice	48 hours
Substrate	Macro-invertebrates	3'x3' kicknet; 500 micron mesh	1 liter plastic wide-mouth bottle	90% ethyl alcohol	6 weeks

12) Sample Handling and Custody Requirements

Describe the procedures used to keep track of samples that will be delivered or shipped to a laboratory for analysis.

13) Analytical Methods Requirements

List the analytical methods and equipment needed for the analysis of each parameter, either in the field or the lab.

14) Quality Control Requirements

List the number and types of field and laboratory quality control samples that will be taken.

A. Field QC Checks:

B. Laboratory QC Checks:

C. Data Analysis QC Checks:

D. Biological Sample QC Checks:

15) Instrument / Equipment Testing, Inspection, and Maintenance Requirements

Describe your plan for routine inspection and preventive maintenance of field and lab equipment and facilities.

Equipment Type	Inspection Frequency	Type of Inspection

16) Instrument Calibration and Frequency

Identify how you will calibrate sampling and analytical instruments.

Equipment Type	Calibration Frequency	Standard or Calibration Instrument Used

17) Inspection / Acceptance Requirements for Supplies

Describe how you determine if supplies such as sample bottles, nets, and reagents are adequate for your program's needs

18) Data Acquisition Requirements

Identify any types of data your project uses that are not obtained through your monitoring activities.

19) Data Management

Trace the path of data management, from field collection and lab analysis to data storage and use.

<u>Part C - Assessment and Oversight (elements 20-21)</u>

20) Assessments and Response Actions

Discuss how you evaluate field, lab, and data management activities, organizations(such as contract labs) and individuals in the course of your project.

A. Field Evaluation & Assessment:

B. Laboratory Evaluation & Assessment:

C. Data Management Evaluation & Assessment:

21) Reports

Identify the frequency, content, and distribution of reports to data users, sponsors, and partnership organizations that detail project status, results of internal assessments and audits, and how QA problems have been resolved.

Part D - Data Validation and Usability (elements 22-24)

22) Data Review, Validation and Verification Requirements

State how you review data and make decisions regarding accepting, rejecting, or qualifying the data. All that is needed here is a brief statement of what will be done, by whom.

23) Validation and Verification Methods

Describe the procedures you use to validate and verify data.

24) Reconciliation with Data Quality Objectives

Once the data results are compiled, describe the process for determining whether the data meet project objectives.